to-digital (A/D) converting unit for converting the segmented output level of the analog signal into a digital signal having a plurality of bits.

2. (Amended) An apparatus according to Claim 1, wherein

said detecting device is a pressure-sensitive device which is arranged at a position relative to said controller such that a pressure acting on said controller is transmitted to said detecting device.

3. (Amended) An apparatus according to Claim 1, wherein said detecting device comprises:

a resistor; and

a conductive member which moves together with said controller for contacting said resistor; and

wherein said conductive member has elasticity, and the output level of the analog signal corresponds to a contact area between said resistor and said conductive member.

4. (Amended) An apparatus according to Claim 1, wherein said detecting device includes:

a conductive member; and

a resistor which moves together with said controller for contacting said conductive member;

wherein said conductive member has elasticity, and the output level of the analog signal corresponds to a contact area between said resistor and said conductive member.

5. (Amended) An apparatus according to Claim 3 or 4, wherein

said conductive member is deformable and a size of the contact area is a function of a contact pressure exerted on said conductive member by said resistor.

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8. (Amended) An apparatus according to Claim 5, wherein said conductive member is formed with a shape having a cross-sectional area which decreases stepwise toward a portion which faces said resistor.

14. (Amended) An apparatus according to Claim 3 or 4, wherein said resistor is formed with a shape having a cross-sectional area which decreases stepwise toward a portion which faces said conductive member.

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15. (Amended) An apparatus according to Claim 3 or 4, wherein

said conductive member is deformable in accordance with a contact pressure exerted on said conductive member by said resistor such that a size of the contact area between said conductive member and said resistor changes; and

said resistor comprises non-conductive regions such that the contact area increases stepwise.

17. (Amended) An apparatus according to Claim 1, wherein said level segmenting unit uniformly segments the output level of the analog signal.

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18. (Amended) A control apparatus, comprising:

a controller;

a detecting device which provides an analog signal in response to a pressure applied to said controller, said detecting device including a resistor and a conductive member which moves together with said controller for contacting said resistor, where said conductive member has elasticity, and an output level of the analog signal corresponds to a contact area between said resistor and said conductive member;

a level segmenting unit for segmenting the output level of the analog signal; and

an analog-to-digital (A/D) converting unit for converting the segmented output level of the analog signal into a digital signal having a plurality of bits.

19. (Amended) A control apparatus, having a controller and a detecting device which provides an analog signal in response to a pressure applied to said controller, wherein said control apparatus further comprises an output unit comprising:

a controller;

a4 a detecting device which provides an analog signal in response to a pressure applied to said controller, said detecting device including a conductive member and a resistor which moves together with said controller for contacting said conductive member, where said conductive member has elasticity, and an output level of the analog signal corresponds to a contact area between said resistor and said conductive member;

a level segmenting unit for segmenting the output level of the analog signal; and

an A/D converting unit for converting the segmented output level of the analog signal into a digital signal having a plurality of bits.

20. (Amended) A control apparatus according to Claim 18 or 19, wherein

said conductive member is deformable and a size of the contact area is a function of a contact pressure exerted on said conductive member by said resistor.

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a5 23. (Amended) A device according to Claim 20, wherein

said conductive member is formed with a shape having a cross-sectional area which decreases stepwise towards a portion

a5 that faces said resistor.

29. (Amended) A device according to Claim 18 or 19, wherein

said resistor is formed with a shape having a cross-sectional area which decreases stepwise towards a portion that faces said conductive member.

a6 30. (Amended) A device according to Claim 18 or 19, wherein

said conductive member is deformable in accordance with a contact pressure exerted on said conductive member by said resistor such that a size of the contact area between said conductive member and said resistor changes; and

said resistor comprises non-conductive regions such that the contact area increases stepwise.

Please cancel claim 16.

Please insert new claims 31-42, as follows:

31. (New) A control apparatus, comprising:

a controller;

a detecting device for providing an analog signal in response to a pressure applied to said controller; and

an output unit for segmenting an output level of the analog signal and for converting the segmented output level of the analog signal into a digital signal having a plurality of bits;

wherein said detecting device has a conductive member and a resistor, and a contact area between said conductive member and said resistor increases stepwise with an increase in said pressure applied to said controller, and the output level of the analog signal corresponds to the contact area between said resistor and said conductive member.

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32. (New) An apparatus according to claim 31, wherein said conductive member moves together with said controller for contacting said resistor such that the output level of the analog signal corresponds to the contact area between said resistor and said conductive member, and said conductive member has elasticity.

33. (New) An apparatus according to claim 31, wherein said resistor moves together with said controller for contacting said conductive member such that the output level of the analog signal corresponds to the contact area between said resistor and said conductive member, and said conductive member has elasticity.

34. (New) An apparatus according to claims 32 or 33, wherein said conductive member is formed with a shape having a cross-sectional area which decreases stepwise toward a portion which faces said resistor.

35. (New) An apparatus according to claims 32 or 33, wherein said resistor is formed with a shape having a cross-sectional area which decreases stepwise toward a portion which faces said conductive member.

36. (New) An apparatus according to claims 32 or 33, wherein said conductive member is deformable in accordance with a contact pressure exerted on said conductive member by said resistor such that a size of the contact area changes; and said resistor comprises non-conductive regions such that the contact area increases stepwise.

37. (New) A device for use in a control apparatus having a controller which provides an analog signal in response to pressure applied to said controller, said device comprising:

an output unit for segmenting an output level of the analog signal and for converting the segmented output level of the analog signal into a digital signal having a plurality of bits;

a conductive member; and

a resistor;

wherein a contact area between said conductive member and said resistor increases stepwise with an increase in the pressure applied to said controller, and the output level of the analog signal corresponds to the contact area between said resistor and said conductive member.

38. (New) An apparatus according to claim 37, wherein said conductive member moves together with said controller for contacting said resistor such that the output level of the analog signal corresponds to the contact area between said resistor and said conductive member, and said conductive member has elasticity.

39. (New) An apparatus according to claim 37, wherein said resistor moves together with said controller for contacting said conductive member such that the output level of the analog signal corresponds to the contact area between said resistor and said conductive member, and said conductive member has elasticity.

a8

40. (New) An apparatus according to claims 38 or 39, wherein said conductive member is formed with a shape having a cross-sectional area which decreases stepwise toward a portion which faces said resistor.

41. (New) An apparatus according to claims 38 or 39, wherein said resistor is formed with a shape having a cross-sectional area which decreases stepwise toward a portion which faces said conductive member.

42. (New) An apparatus according to claims 38 or 39, wherein said conductive member is deformable in accordance with a contact pressure exerted on said conductive member by said resistor such that a size of the contact area changes; and said resistor comprises non-conductive regions such that the contact area increases stepwise.